AUTHOR INDEX

Anderson, A. J. 33

Bell, A. W. 103
Borek, C. 269
Brent, T. P. 121

Chiappinelli, V. A. 1
Cleaver, J. E. 269

Daugherty, A. 237

Endo, A. 257

Ferrone, S. 209
Fisher, P. B. 209
Fram, R. J. 165

Giacomini, P. 209
Gibson, N. W. 153
Greiner, J. W. 209

Hales, J. R. S. 103
Harris, J. B. 79
Hartley, J. A. 153
Harvey, A. L. 33

Kufe, D. W. 165
Kusama, M. 209

Langer, J. A. 209

Mattes, W. B. 153
Milam, K. 269
Morgan, W. F. 269

Pestka, S. 209
Pollak, O. J. 177

Schlom, J. 209
Schonfeld, G. 237
Spector, T. 295
Stadel, J. M. 57

Yarosh, D. B. 141

SUBJECT INDEX

Acyclovir and herpes simplex 300
Acetylcholine, snake venom toxins 1
Adverse drug reactions, sitosterol 195–97
O^6-Alkylguanine-DNA alkyltransferase 121–39
  chloroethylnitrosourea-treated DNA substrate 135
  cross-link suppression 128, 135–39
    CENU 138
  electrophoresis 133
  gel chromatography 132
  inactivation 135
  monoadduct stability 137
  properties 131–34
  purification in leukemia 129
  purity 131, 132
  stability 133, 134
  substrate specificity 134, 135
Animal models, exercise and heat stress 103–105
Aphidicotin, DNA lesion repair 173
Atherosclerosis
  epidemiology 238, 239
  lipoprotein 237–49
    disorders 239–41
  origin of term 237
  pathology 237, 238
  plant sterols 177–204
  theories 238

Blood flow and deep body temperature 114
β-Bungarotoxin 84
κ-Bungarotoxin 14–16
  and β-bungarotoxin 17
  ciliary ganglion 20
  localization studies 19–21
  structure 15
  trimetaphan protection 17

Cell culture
  leukemia lymphoblasts 129
  MER-phenutype 142
Chloroethylmethane sulfonates 153–62
Chloroethylimidazoltetrazines, DNA lesion induction 153–62
Chloroethylnitrosoureas (CENU) 121
  cross-linking 122, 123
  decomposition 122
  DNA lesions 153–62
  electrophoresis of DNA 124
  structures 121
Cholesterol
  dietary control 186
  low-eggs 188, 189
  pathways 183
  reverse transport 249
  sitosterol interplay 182, 183
Cholestyramine and β-sitosterol 196, 197
Chromosomal aberrations 276–78
Circulation and posture 104
Compactin-related compounds
  chemistry 257
  fibroblast growth 261
  hypocholesteremic activity 260–64
  lipoprotein-cholesterol levels 263
  mechanism of action 264
  plasma-LDL lowering 264, 265
  sterol synthesis inhibition 260
  structures 258
Cytosine arabinoside
  biological effects 167
  DNA excision repair 165–74
  DNA incorporation and u.v. 170, 171

Dendrotoxins
  amino acid sequence 36
  autonomic nervous system 46
  brain membrane binding 50, 51
  central nervous system 48–50
  chemical properties 35
  chick biventer cervicus 34
  hippocampal CA1 neuron 48, 49
  motor nerve terminal spike 44
  mouse diaphragm 40, 41
  neuromuscular junctions 40–46
  neuromuscular transmissions 33, 34
  potassium and sodium node currents 45
  sites of action 42
  structure and activity 37–39
  target sites isolation 50–52
  temperature effects on action 41
  toxin 1 45
  vas deferens preparations 47
DNA
  affinity chromatography 131
  interstrand cross-links
    assay 125–27
    suppression 127, 128
    time course 126
  O^6-methylguanine disappearance 128, 129
  replication synthesis 165–68
DNA adduct identification 157, 158
DNA lesions 153–62
  alkaline elution 154–56
  base sequence selectivity 158–62
  chloroethylating agents 153–62
  N7-guanine alkylation 160
DNA repair 141–49
  accumulation methods 283
  capacity, tumor cells 141–49
  DNA synthesis inhibitors 168–72
  poly(ADP-ribose) synthesis 269–87
  poly(ADP-ribose) synthesis inhibitor 281–85
  replication and excision repair 284, 285
  single-strand breaks 282, 283
  X-ray induced damage 165–72

Exercise 103–18
  cardiac output 106
  cardiovascular function 105, 106

central blood volume 113
exercise-induced blood flow depression 115
heat stress 109
humans 112–15
hydration state 114
and pregnancy 116, 117

Flow cytometry 214, 215

Heat stress 103–18
arteriovenous anastomoses 112
cardiac output 108–12
cardiovascular function 108
circulatory response 110
exercise 109
humans 112–15
pregnancy 116, 117
3-Hydroxy-3-methylglutaryl CoA (HMG-CoA) reductase
drugs inhibiting 257–65
mechanism 259, 260
inhibitors, structure 259
reactions 258
Hydroxyurea, DNA excision repair 165–74
Hypercholesterolemia 183–85
risk factors 185, 186
types 184, 185
Hyperphytosterolemia 181, 182

Interferon
antigen-enhancing 216, 217
antiproliferative 216, 217
mammary carcinoma cell response 219–22
melanoma cell antigen shedding 225–27
melanoma cell morphology 229, 230
modification 218
tumor-associated antigen exposure 210–23

Lipoprotein
atherosclerosis initiation 237–49
chylomicrons 241
experimental 241–49
HDL 248, 249
IDL 241
LDL 239, 242, 244, 245
VLDL 241–44
genetic disorders 239
labels 246
LDL arterial tissue sites 247
serum levels and drug regimens 263

Membrane lipids 87, 88
O^6-Methylguanine-DNA methyltransferase
assays 127, 128, 144, 145
chromatography 130
DNA lesion loss 145, 146
inducibility 143
inhibition 147, 148
methyl group transfer 146, 147
repair 142–48
substrates 144
suicide kinetics 143
Mexerein, melanoma cell morphology 229, 230
Microspheres, radioactive 104, 105
Monoclonal antibodies, mammary tumor cells
heterogeneity 211
interferon effects 211–14

α-Neurotoxins
amino acid sequences 3
nicotinic receptor probe 2–4
nicotinic transmission 11–13
types 4
κ-Neurotoxins, types 14–21
Neurotransmission, snake venom facilitating 33–52

Phospholipase
amino acid sequences 81
calcium role in binding 83
classification 80
membrane lipids 87, 88
myotoxicity 89, 95–97
neurotoxicity 89–95
presynaptic activity 88–95
residue organization 83
snake venom effects 78–98
toxins 21, 22
venom 84–87
amino acid sequences 86
stability 87
subunits 85, 86
Photoaffinity labeling, β-adrenergic receptors 57–74
regulation mechanisms 69–73
Photoaffinity labels
adenylate cyclase 68
K_D 60
label development 58–62
rat lung incorporation 66, 67
recorder molecules 61
structures 60
Phytosterols 177–79
absorption 180, 181
animal experiments 186–90
clinical studies 190–93
cotton bud 179
dietary use 198–203
fauna 179, 180
food incorporation 192, 193
pharmacological use 197, 198
plant composition 202
prophylaxis 203, 204
Poly(ADP-ribose)
chain elongation 270
inhibitors 272–75
and DNA repair 281–85
polymerization and cell killing 286, 287
protein function 271, 272
substrate protein 271
synthesis and DNA damage 269–87
enzymic 269–71
role in damage 285–87
synthetase
cell response 275–81
cell survival 277
inhibitor effects 276
toxicity 275, 276
Potassium channels, snake venom blocking 33–52
Pregnancy, exercise and heat stress 116, 117

Receptors, β-adrenergic
desensitization 70
down-regulation 73

electrophoresis 64
desensitized 71
identification 62–66
mobility 70
photoaffinity labeling 57–74
protein size 73
regulation mechanisms 69–73
sensitized, electrophoresis 72
structure, probes 66–69
subtypes and features 63
Receptors, nicotinic
amphibian 12, 13
avian 7–9
invertebrate 22–25
mammalian 5–7
CNS 9–11
muscle and electric organ 2
snake venom toxins 1–27
vertebrate 4–22
Receptors, non-cholinergic, snake toxins 25, 26
Ribonucleotide reductase
acyclovir effect 300
chemotherapeutic role 299, 300
herpes simplex 295
inhibition 295–300
competitive 297
irreversible 299
reversible 297, 298
β-RTX 26

Sitosterol
clinical studies 193–95
egg 188, 189
intake and dosage 190
properties 189
side effects 195–97
Sitosterol–cholesterol interplay 182, 183
Snake venom toxins *see also* neurotoxins, phospholipases
autonomic NS 92, 93
cell-free systems 93–95
glands 1
myotoxicity 89, 95–97
effects 96
neuromuscular junctions 90–92
neurotoxicity 89–95
neurotransmission facilitation 33
nicotinic receptors 1–27
non-cholinergic receptors 25–27
potassium channel blocking 33–52
snake families 79, 80
structures 89

Transformation 278
poly(ADP)ribose polymerase 278–80
Tumor-associated antigen expression
antiproliferative interferon 220–22
colon carcinoma 214
histocompatibility modulation 227
interferon effects 210–23
enhancement 222
melanoma antigens 223–25
melanoma shedding 223–31
modulation 209–32
monoclonal antibodies 209
radioimmunometric binding assay 224

Ultraviolet, damage repair 167, 168

Vipoxin 25, 26
Virus, herpes simplex and ribonucleotide reductases 295–300

X-ray, damage repair 167, 168

Zoosterols 179, 180